

Mineral Industry Surveys

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U.S. PRODUCTION OF SELECTED MINERAL COMMODITIES IN THE THIRD QUARTER 2023

U.S. mine and plant production data for 16 selected mineral commodities are provided on a monthly (or quarterly) basis by the U.S. Geological Survey to the Board of Governors, Federal Reserve System (FRS), for use in preparing its index of industrial production and the related capacity indexes and capacity utilization rates. These measures cover manufacturing, mining, and electric and gas utilities, and they are among the key economic indicators monitored by the FRS for guidance in determining national monetary policy.

Construction Materials

The combined production of construction-related materials (cement, construction sand and gravel, crushed stone, and gypsum) in the third quarter of 2023 increased by 4% compared with that in the second quarter of 2023 following the typical seasonal trend (fig. 1, tables 1, 2) but production in the third quarter of 2023 was 3% lower than that in the third quarter of 2022. Production of construction sand and gravel, and crushed stone in the third quarter of 2023 were 7% and 3% higher, respectively, than that in the second quarter of 2023. Cement production was slightly lower and gypsum production was 3% lower in the third quarter of 2023 compared with that in the second quarter of 2023 (fig. 1, table 1). During the first nine months of 2023 compared with the first nine months of 2022, production increased for gypsum (1%) but decreased for construction sand and gravel (5%), cement (3%) and crushed stone (1%) (table 1).

Base Metals

Comparing the third quarter of 2023 with the second quarter of 2023, production increased for copper (6%), iron ore (5%) and secondary aluminum (2%), but production decreased for lead (15%) and zinc (6%) (fig. 2, tables 1, 2). Production increased for iron ore (8%) and secondary aluminum (6%) through the first nine months of 2023 compared with the first nine months of 2022 but decreased for copper (10%), zinc (7%), and lead (1%).

Precious Metals

During the third quarter of 2023, gold production increased by 4%, platinum production increased by 3%, palladium production was unchanged and silver production decreased by 9% compared with production in the second quarter of 2023. In the first nine months of 2023, silver production was 3% more compared with production in the first nine months of 2022, but gold production was 1% less (fig. 3, table 1). Palladium and platinum production were 2% and 1% lower, respectively, in the first nine months of 2023 compared with the same time period in 2022 (tables 1, 2).

Other Mineral Materials

Molybdenum production was slightly higher in the third quarter of 2023 than that in the second quarter of 2023 and was 2% higher in the first nine months of 2023 compared with that in the same time period in 2022. Phosphate rock production was an estimated 5% higher in the third quarter of 2023 than that in the second quarter of 2023 but was 2% lower in the first nine months of 2023 compared with that in the same time period in 2022. Soda ash production was 5% lower in the third quarter of 2023 compared with that in the second quarter of 2023 and was 2% lower in the first nine months of 2023 compared with that in the same time period in 2022 (tables 1, 2).

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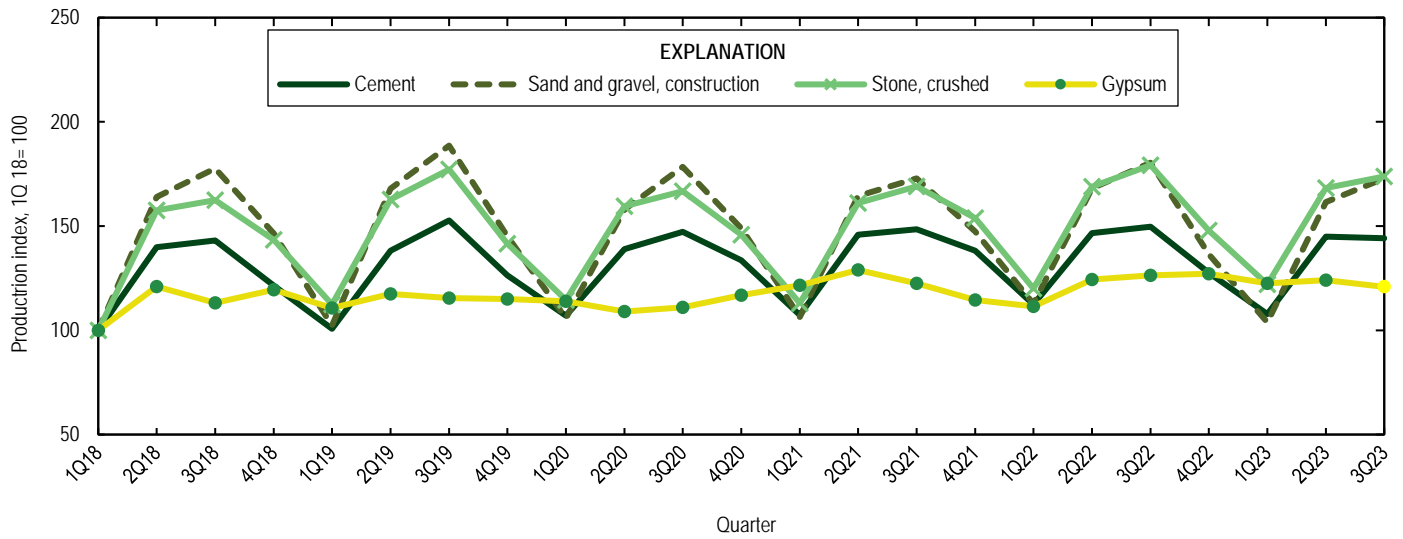


Figure 1. U.S. production of selected construction-related mineral commodities from the first quarter of 2018 through the third quarter of 2023, indexed to the first quarter of 2018.

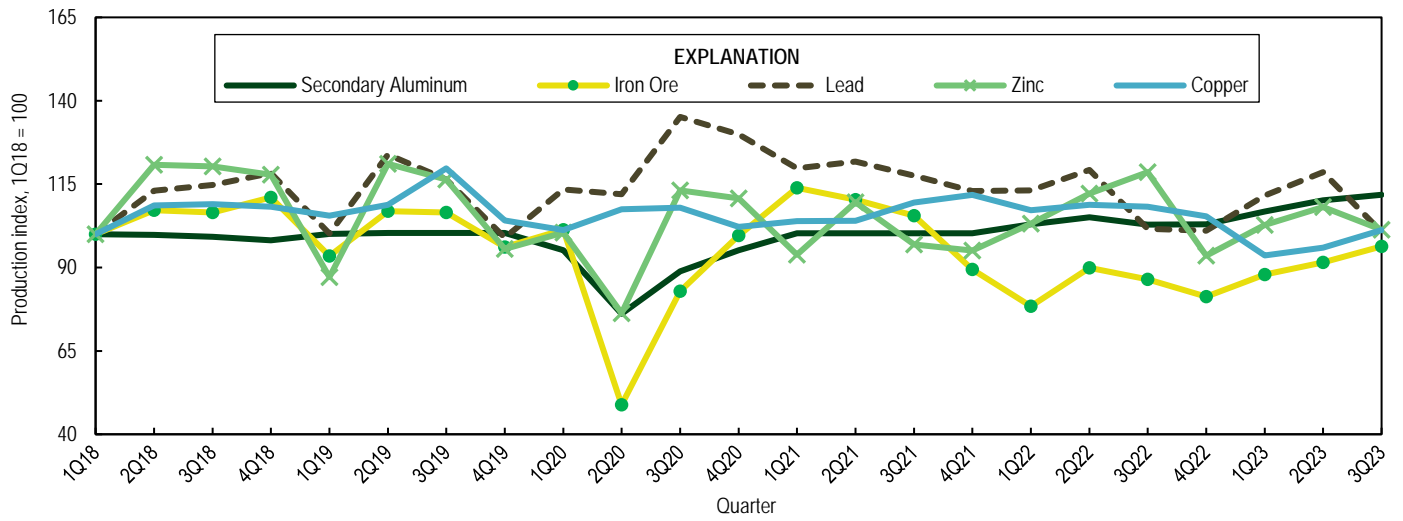


Figure 2. U.S. production of selected base metals from the first quarter of 2018 through the third quarter of 2023, indexed to the first quarter of 2018.

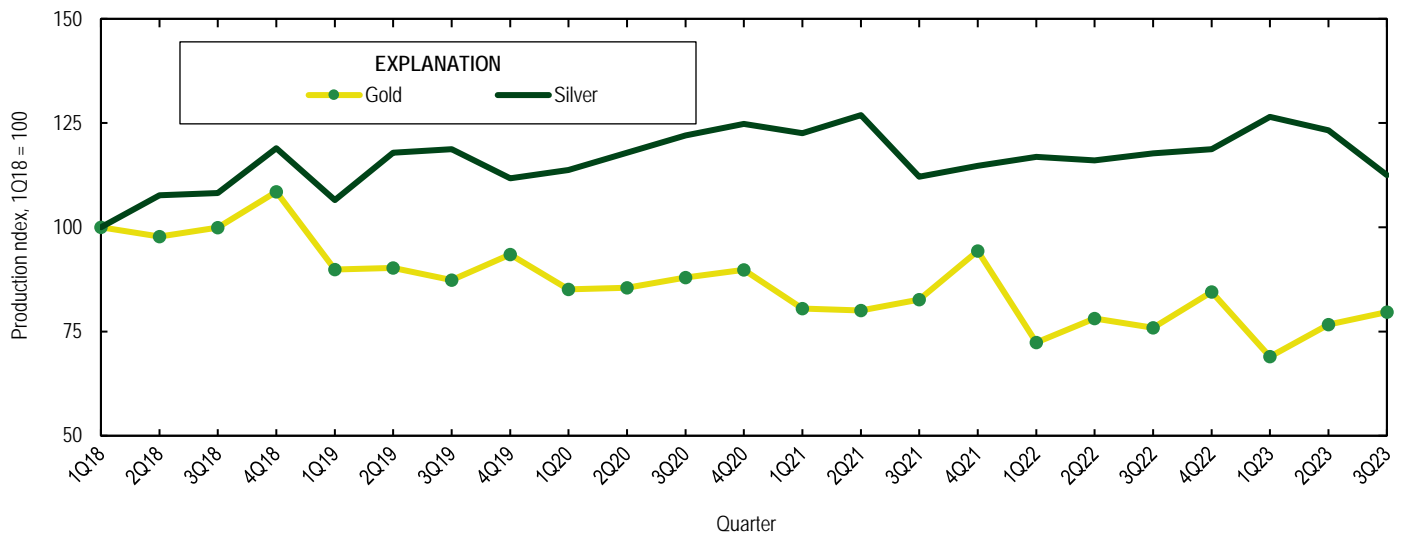


Figure 3. U.S. mine production of gold and silver from the first quarter of 2018 through the third quarter of 2023, indexed to the first quarter of 2018.

TABLE 1
PRODUCTION TRENDS FOR SELECTED MINERAL COMMODITIES¹

Mineral commodity	Percent change, 3d quarter 2023 vs. 2d quarter 2023	Percent change, YTD 2023 vs. YTD 2022
Aluminum (secondary)	2	6
Cement ^c	-1	-3
Copper	6	-10
Gold	4	-1
Gypsum	-3	1
Iron ore	5	8
Lead	-15	-1
Molybdenum	1	2
Palladium	--	-2
Phosphate rock ^c	5	-2
Platinum	3	-1
Sand and gravel, construction	7	-5
Silver	-9	3
Soda ash	-5	-2
Stone, crushed	3	-1
Zinc	-6	-7

^cEstimated. -- Zero.

¹Based on data available through December 18, 2023.

TABLE 2
U.S. PRODUCTION OF SELECTED MINERAL COMMODITIES, BY QUARTER^{1,2}

Commodity		2022					2023			1st quarter– 3d quarter	
		1st quarter	2d quarter	3d quarter	4th quarter	1st quarter– 4th quarter	1st quarter	2d quarter	3d quarter	2022	2023
Aluminum ^{3,3}	thousand metric tons	215	219	215	215	864	223	230	233	649	686
Cement ^{4,4}	million metric tons	18.9	24.7	25.2 ^r	21.5	90.4 ^r	18.2	24.4	24.3	68.9	66.9
Copper ⁵	thousand metric tons	308	312 ^r	311 ^r	302	1,230	269	275	291	931	835
Gold ⁵	metric tons	40.2	43.4	42.2	46.9	173	38.3	42.6 ^r	44.2	126	125
Gypsum ⁶	million metric tons	4.3	4.7	4.8	4.9	18.7	4.7	4.7 ^r	4.6	13.8	14.0
Iron ore ⁷	do.	9.1 ^r	10.4 ^r	10.0 ^r	9.4 ^r	39.0 ^r	10.2 ^r	10.6 ^r	11.2	29.6	32.0
Lead ⁵	thousand metric tons	68.6	72.3	61.6	61.3	264	67.7	71.9 ^r	61.0	203	201
Molybdenum ⁵	do.	8.8	7.7	7.9	10.2	34.6	8.1	8.4	8.4	24.4	25.0
Palladium ⁵	metric tons	2.9	2.6	2.0	2.5	10.1	2.4	2.5 ^r	2.5	7.6	7.4
Phosphate rock, marketable ⁸	million metric tons	4.6	5.3	5.5	4.2	19.8 ^r	4.7 ^e	5.0 ^{r,c}	5.3 ^e	15.4	15.0 ^e
Platinum ⁵	metric tons	0.9	0.8	0.6	0.7	3.0	0.7	0.7	0.8	2.3	2.2
Sand and gravel, construction ⁹	million metric tons	180 ^r	268 ^r	287 ^r	218 ^r	953 ^r	165 ^r	257 ^r	275	735	698
Silver ⁵	metric tons	251 ^r	249 ^r	253 ^r	255 ^r	1,010 ^r	272	265	242	753	778
Soda ash ⁷	million metric tons	2.8	2.7	2.7	3.0	11.3	2.6	2.8	2.7	8,300	8,100
Stone, crushed ⁹	do.	302 ^r	424 ^r	450 ^r	371 ^r	1,550 ^r	307 ^r	423 ^r	437	1,180	1,170
Zinc ⁵	thousand metric tons	180	195	206	163	744	179	188	176	581	543

⁶Estimated. ^rRevised. do. Ditto.

¹Based on data available through December 18, 2023.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Aluminum alloys produced at secondary smelters in the United States, less primary aluminum consumed, primary silicon consumed, and other alloying ingredients consumed.

⁴Shipments of domestically produced portland and blended cement, including cement made from imported clinker, as a proxy for actual domestic cement production.

⁵Recoverable mine production.

⁶Calcined production.

⁷Mine production.

⁸Marketable mine production. First to fourth quarter 2022 total may not add to quarterly data owing to annual adjustments that are not broken out by quarter.

⁹Sold or used; quarterly survey based on sample survey.